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The Sanitary Survey of a House.



THE
SANITARY SURVEY OF A HOUSE:

BY ✓
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In every village, town, or city there are buildings denominated, by the older and more superstitious residents of the place, "haunted houses;" that is, some murder, crime, or mystery is so connected with the history of the house as to bring it into disrepute, and the spirits of the departed are supposed to hover around the house and make it untenable. And so there are, in every village, town, and city, certain houses which, by reason of their history, may well be called, by sanitarians, haunted. In some, whole families have been swept away by consumption, caused by dampness of the soil under and around the dwelling; or in others, faulty plumbing or foul surroundings have caused the death of the younger members of the household, from diphtheria or some other filth disease.

Fortunate indeed would it be if the spirits of the departed would warn prospective tenants away from these fated dwellings, or induce the owners to set their houses in order and look well to the surroundings. But there are no ghostly monitors to point out the unhealthful houses or sites: hence we must look to those more tangible mentors, our local health authorities, to perform this kindly work.

Recognizing, then, that an important duty to be imposed upon the health boards is the proper inspection of dwellings with regard to their healthfulness, let us outline a plan to be followed in this work. To obtain a history of each house in a city or town would be a difficult task, if no system were employed; but, on the other hand, the desired facts could be collected with ease if a comprehensive form be used, by means of which important points are noted.

As it was the intention of the Board of Health of Paterson, N. J., to make a sanitary survey of at least a portion of the dwelling-houses in that city, we set about to prepare a list of facts concerning which information was desired. At first thought this seemed an easy exercise, for it was supposed that such a form could be found ready at hand, in some treatise or report on sanitary subjects; but as the plan developed by study, it was ascertained that no scheme for the sanitary survey of a house had been published:—hence our form had to be evolved, and built up from the foundation. This proved to be a very interesting task, and

the writer herewith offers the schedule which resulted from his study of the subject, with notes thereon, hoping that it may assist other students of public hygiene, and perhaps excite discussion, and thus draw attention to the strong and weak points in it.

My object was to draw up a schedule that would contain all the facts that might prove of value in estimating the sanitary value of a house, and at the same time present these facts in such a shape that they might be easily employed in the work of inspection: hence the form is printed out, so that all the inspector has to do is to draw his pencil through certain words, or underscore others, thus rapidly completing the work.

I shall now take up the various points to be considered in what seems to be their natural order.

First.—We should examine the sanitary condition of the street on which the house faces.

THE STREET.

Under this head note the direction the street runs, whether north, south, east, or west, for the information thus derived bears on the amount of sunlight a house receives: for instance, a house which faces the north will receive none of the morning sun in the lower rooms. Next, note the width of the street; for a narrow street, with high buildings on both sides, would not allow much circulation of air nor play of sunlight, and the street and the lower stories of the houses would be damp.

The grade of the street also is of importance, and has to do with the rapidity with which surface-water runs off, and hence bears on its cleanliness and dryness. The condition of the pavement also has much to do with the healthfulness of a street; for, as Dr. E. J. Marsh puts it, "the condition of a street for convenience of travel runs closely parallel with its condition as to cleanliness, and the streets in worst repair are generally the dirtiest, and an unpaved street in a city can scarcely be kept clean."

The gutters also claim our attention; for those made of rough or cobble stones allow much filthy material to collect in the spaces between the stones, and cannot be kept clean.

Notes on the sewer in the street should be taken, and should comprise the material of which it is built,—the size, shape, depth below the surface, fall, and whether it is competent or not.

When these notes are down, we may then easily sum up and express an opinion as to the sanitary condition of the street.

Before leaving the street, it would be well to observe the presence or absence of shade-trees,—how close they are to the house, and whether they interfere with the lighting of the house. In wide streets, with the house well set back from the sidewalk, shade-trees are of great value, as they keep off the glare of the sun, and temper the air very much; but in

narrow streets they are a positive detriment, for they are apt to cause dampness in the front rooms and basement of the house.

Next we examine that important subject,

THE SITE OF THE HOUSE.

We note down under this head how high the site is above sea-level; whether the soil is gravel, sand, rock, clay, loam, or made ground; whether it is the site of an old water-course or swamp. Is the site damp? and has it been drained? If so, how? All these facts have the most important bearing on the healthfulness of a house; for we cannot expect a house built upon a damp soil, or upon made ground, or ground filled up with organic matter, to be in a good sanitary condition.

Before going into the yard, it would be well to make a diagram of the site, and to put down the outlines of the house, and also the position of the well, cistern, cesspool, privy, and the drains.

THE YARD.

Going into the yard, we observe whether it is paved and drained; whether slops and garbage are allowed to accumulate; how the privy-vaults or cesspools are constructed, and if offensive, and how far these are from the well or cistern.

The water-supply, whether from the city mains, well, or cistern, should be examined into. If from well or cistern, an analysis should be made. Sources of contamination should be found out.

Observe, also, whether cattle, goats, or fowls are kept in the yard, and whether any nuisance exists on the lot, or on the adjoining property.

THE HOUSE.

From an external inspection, we note how the house faces; the number of stories; the material of which it is constructed; and the kind and quality of the roof. If the house is of wood, observe if it has been properly sheathed before the clapboards were put on, and whether "fire-stops" were put in.

The size of the house, and the ratio of unoccupied space on the lot, are of importance; also, whether there are any back buildings.

We next visit the cellar, and notes are taken as to its height, construction, and condition. How is the foundation built—of stone, brick, or rubble? Is there any damp-course? How far below the sidewalk is the ceiling? Are windows provided for light and ventilation? Is the cellar floored or concreted, and is it dry? Is it used for a dwelling, or sleeping-room, or work-shop? The condition of the water-closet, if in the cellar, should be looked after, for it will generally be found to be filthy.

The ventilation and lighting of the house are to be next considered;

and the existence of rooms not provided with a communication with the external air should be looked for.

The methods of heating should also be noted down.

Under the head of plumbing and drainage, full and careful notes should be taken, for more defects will be noticed here than elsewhere in the dwelling. We observe whether the house is connected with sewer or cesspool, and if so, by what means; and if the house is separated from the sewer or cesspool by a vented, running trap, properly situated. A searching examination should be made for all defects, and proper tests applied to learn if any leaks exist.

When we shall have completed our notes on the house and its surroundings, we then jot down the vital statistics, such as the population, number of families, number to each family, number under five years of age, and number of rooms used by each family.

Now comes in a very important series of facts relating to the amount of disease, or the number of deaths in the house under inspection; and the accuracy and usefulness of our deductions depend on the care with which the records are kept by the local health board. To be of any use to society, the vital statistics of a town should be kept and used by the local health authorities in a systematic manner. The returns of deaths, and of cases of contagious and preventable diseases, should be so tabulated that the sanitary officer may at any time tell the condition of any house in the town. If, for instance, cases and deaths, of dysentery, diphtheria, or typhoid fever, occur frequently in a certain dwelling, a strict search would, in most instances, reveal the cause; and thus we might be enabled to avert trouble in the future.

Intelligent sanitary administration is made so by attention to minor details; and a health officer can do efficient service if he appreciate the use of the vital facts at his command.

But, without going more into detail, I have said enough to show that there are a great many things to be looked after when inspecting a house; and had I prepared this paper for popular use, I would have given reasons for each one of the facts noted. To an audience of sanitarians it does not seem necessary to tell why so many points have been insisted upon.

In closing, I would apologize for offering this fragment; but the hope that some health officer would be set to thinking has prompted me to present it.

I append the schedule prepared for the Board of Health of Paterson, N. J., upon which this paper is based.¹

¹Since writing, I have been favored with a form for the sanitary inspection of a tenement house, prepared by Mr. F. N. Owen, inspector for the New York Tenement Commission. This is a very comprehensive and complete form, but it is mainly applicable to large houses in our great cities.

SCHEDULE FOR THE SANITARY SURVEY OF A HOUSE.

(The inspector will cross out all but the correct words, and will fill in spaces.)

Date
 Street, Number
 Street runs N., S., E., W. Width . . feet. Grade
 Pavement.—Cobble, block, Macadam, Telford, none.
 Gutters.—Paved, curbed, smooth.
 Sewer.—Material, brick, pipe ; size ; shape ;
 depth below surface . . feet; fall . . inch to . . foot; runs into St.
 sewer; condition
 Condition of street and gutters
 Shade-Trees.—How far from the house ; prevent sun exposure? . . .

SITE OF HOUSE.

. . . feet above sea-level.
 Soil.—Gravel, sand, clay, loam, rock, made ground, filled in with ;
 site of swamp,—old water-course, pond; damp, dry. Was site drained before building?
 ; how? ; is surrounding land higher than site, or lower?

DIAGRAM OF LOT.

w.—well.
 c.—cistern.
 p.—privy.
 c. p.—cesspool.
 c. b.—catch basin.
 - - - drain.

FRONT.



Width of alley, if any.

Yard.—Paved, flagged, cemented, drained, clean, slops, garbage.

Privy-vault.—Stone, brick, board, none, water-tight, connected with sewer, supplied
 with water, clean; how near living rooms

Water-closet.—Style, clean.

Cesspool.—Stone, brick, tight, leaching, connected with sewer

Water supply.—City, well,—depth of ,—cistern.

Distance of well from source of pollution.

Analysis of water.

HOUSE.

Owner.

Agent.

Tenement.—Private, boarding-house

House faces N., S., E., W.; sun exposure,—good, bad; 1-, 2-, 3-, 4-story; number of
 rooms

Construction.—Brick, stone, wood; sheathed before clapboarding;
 fire stop

Roof.—Tin, shingle, slate, tar, gable, flat, French, leaky.

Scuttle fire escapes

Size of house ; size of lot

Ratio of unoccupied space

- Back-building,—distance from house
- Cellar.—Foundation,—stone, brick; how laid ; asphalted or cemented ; damp-course ; depth below sidewalk ;
- floor,—cemented, asphalted, stone, board ; dry, damp.
- Water-closet,—condition.
- Windows Is room used for sleeping-room, living-room, shop?
- Ventilation of house.
- Illumination.—Window space.
- Rooms not connected with external air
- Heating.—Fire-place, stove, furnace, steam; has furnace an air box?
- Plumbing.—Is house connected with sewer or cesspool?
- Angle of connection with sewer.
- House-drain.—Lead, iron, earthen-ware; size ; fall ; caulked joints, cement joints; how fixed in cellar; under ground or exposed.
- Main trap inlet for fresh air
- Soil-pipe.—Iron, lead, ; size ; joints ; angle of connection with house drained ; extend above roof.
- Does ventilating-pipe run into soil-pipe?
- Traps under fixture traps vented.
- Water-closets.—Number ;—pan, hopper, plunger, syphon ; sufficient wash
- Are there any adjoining nuisances?
- Are fowls, goats, or cattle kept on premises?

VITAL STATISTICS.

- Population of house.
- Number under five years of age.
- Number of families.
- Number to each family.
- Number of rooms to each family.
- Diseases reported.—Scarlet fever, diphtheria, typhoid fever, dysentery, diarrhœal diseases,
- Deaths.



